

I claim:

1. A method for allocating a resource to a mobile station in a wireless communications network having at least one mobile base station, said method comprising the steps of:

collecting measurements of interference and load in said wireless communications network, wherein said collected measurements include nominal resource availability information and measured resource availability information;

processing said collected information to identify a resource for said mobile station; and

assigning said resource to said mobile station.

2. The method of claim 1, wherein said measurements are collected from both said mobile station and said base stations.

3. The method of claim 1, wherein said nominal resource availability information provides a measure of the load on said wireless communications network.

4. The method of claim 1, wherein said measured resource availability information provides a measure of the interference on said wireless communications network.

5. The method of claim 1, wherein said nominal resource availability is a nominal capacity value for each band on said network less the number of users on said band.

6. A method for allocating a resource to a mobile station in a wireless communications network having a plurality of base stations including at least one mobile base station, said method comprising the steps of:

collecting measurements of interference and load in said wireless communications network, wherein said collected measurements include received power measurements from neighboring base stations;

processing said collected information to identify a resource for said mobile station; and
 5 assigning said resource to said mobile station.

7. The method of claim 6, wherein said power measurements are received from said neighboring base stations on a beacon channel.

10 8. The method of claim 6, wherein said received power measurements provide an indication of the distance to a neighboring base station.

9. The method of claim 6, wherein said measurements are collected from both said mobile station and said base stations.

10. A method for allocating a resource to a mobile station in a wireless communications network having a plurality of base stations including at least one mobile base station, said method comprising the steps of:

collecting measurements of interference and load in said wireless communications network, wherein said collected measurements include predicted new load information;

processing said collected information to identify a resource for said mobile station; and

assigning said resource to said mobile station.

25 11. The method of claim 10, wherein said predicted new load, $\mu_{l,i}^D$, is computed as follows:

$$\mu_{l,i}^D = p_{l,i}^D \sum_{k=1}^K \lambda_k^D .$$

12. A method for allocating a resource to a mobile station in a wireless communications network having a plurality of base stations including at least one mobile base station, said method comprising the steps of:

collecting measurements of interference and load in said wireless communications network;

processing said collected information to identify a resource for said mobile station such that said resource allocation minimizes a call drop rate; and

assigning said resource to said mobile station.

13. The method of claim 12, wherein said call drop rate ensures that a resource will not be assigned to said mobile station if a likelihood that allocating said resource to said mobile station will cause another mobile station to be dropped exceeds a predefined threshold.

14. A system for allocating a resource to a mobile station in a wireless communications network having at least one mobile base station, said system comprising:

a memory for storing computer readable code; and

a processor operatively coupled to said memory, said processor configured to:

collect measurements of interference and load in said wireless communications network, wherein said collected measurements include nominal resource availability information and measured resource availability information;

process said collected information to identify a resource for said mobile station;

and

assign said resource to said mobile station.

15. The system of claim 14, wherein said measurements are collected from both said mobile station and said base stations.

16. The system of claim 14, wherein said nominal resource availability information provides a measure of the load on said wireless communications network.

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17. The system of claim 14, wherein said measured resource availability information provides a measure of the interference on said wireless communications network.

18. The system of claim 14, wherein said nominal resource availability is a nominal capacity value for each band on said network less the number of users on said band.

19. A system for allocating a resource to a mobile station in a wireless communications network having a plurality of base stations including at least one mobile base station, said system comprising:

a memory for storing computer readable code; and
a processor operatively coupled to said memory, said processor configured to:
collect measurements of interference and load in said wireless communications network, wherein said collected measurements include received power measurements from neighboring base stations;
process said collected information to identify a resource for said mobile station;
and
assign said resource to said mobile station.

20. The system of claim 19, wherein said power measurements are received from said neighboring base stations on a beacon channel.

21. The system of claim 19, wherein said received power measurements provide an indication of the distance to a neighboring base station.

22. The system of claim 19, wherein said measurements are collected from both said mobile station and said base stations.

23. A system for allocating a resource to a mobile station in a wireless communications network having a plurality of base stations including at least one mobile base station, said system comprising:

a memory for storing computer readable code; and
 a processor operatively coupled to said memory, said processor configured to:
 collect measurements of interference and load in said wireless communications
 network, wherein said collected measurements include predicted new load information;
 5 process said collected information to identify a resource for said mobile station;
 and
 assign said resource to said mobile station.

24. The system of claim 23, wherein said predicted new load, $\mu_{l,i}^D$, is computed as
 follows:

$$\mu_{l,i}^D = p_{l,i}^D \sum_{k=1}^K \lambda_k^D .$$

25. A system for allocating a resource to a mobile station in a wireless
 communications network having a plurality of base stations including at least one mobile base
 station, said system comprising:

collecting measurements of interference and load in said wireless communications
 network;

processing said collected information to identify a resource for said mobile station
 such that said resource allocation minimizes a call drop rate; and

assigning said resource to said mobile station.

26. The system of claim 25, wherein said call drop rate ensures that a resource will
 not be assigned to said mobile station if a likelihood that allocating said resource to said mobile
 station will cause another mobile station to be dropped exceeds a predefined threshold.